

CLAIMS

1. Apparatus comprising, in combination: a wedge moveable along a first axis, with the wedge having a wedge surface arranged nonparallel to the first axis; an actuator moveable along a second axis perpendicular to the first axis, with the actuator having a wedge engaging surface that engages with the wedge surface, with the actuator having a friction creating portion, with movement of the actuator along the second axis being dependent on movement of the wedge along the first axis; and a wedge axial mover in contact with the wedge for moving the wedge along the first axis, with the wedge axial mover in motion isolated contact to prevent motion transfer from the wedge to the wedge axial mover nonparallel to the first axis.

2. The apparatus of claim 1 with the wedge axial mover comprising, in combination: a first chamber; and a first piston moveable in the first chamber along the first axis; with the first piston in motion isolated contact with the wedge to move the wedge along the first axis in response to introduction of fluid in the first chamber.

3. The apparatus of claim 2 with the first chamber separated from the wedge by a stem guide, with the first piston further having a stem, with the stem extending along the first axis in the stem guide and with the stem abutting the wedge opposite of the stem guide than the first chamber.

4. The apparatus of claim 2 with the wedge axial mover further comprising, in combination: a second chamber; and a second piston moveable in the second chamber along the first axis, with the second piston in motion isolated contact with the wedge to move the wedge along the first axis in response to introduction of fluid in the second chamber.

5. The apparatus of claim 4 with the second piston having the shape of a disk, with the disk having a surface perpendicular to the first axis and with the surface abutting the wedge.

6. The apparatus of claim 4 with the introduction of fluid in the first chamber and the introduction of fluid in the second chamber moving the first piston and the second piston in the same direction.

7. The apparatus of claim 1 with the wedge axial mover comprising a spring mounted along the first axis, with the wedge being biased by the spring in one direction along the first axis.

8. The apparatus of claim 1 further comprising, in combination: a housing; and an adjustable guide in the housing and that is adjustable in the second axis perpendicular to the first axis, with the wedge further having a guide engaging surface in contact with the adjustable guide to adjust the position of the wedge in the second axis by slideable contact with the adjustable guide.

9. The apparatus of claim 8 with the housing having a disk shaped opening, with the adjustable guide having a disk shape for receipt in the disk shaped opening, and with the wedge slidably mounted on the guide to adjust the position of the wedge in the second axis by slideable contact with the adjustable guide.

10. The apparatus of claim 9 with the disk shaped opening having a threaded guide aperture for receipt of the adjustable guide, with the adjustable guide further having threads for slidably mounting in the threaded guide aperture to adjust the position of the wedge in the second axis by slideable contact with the adjustable guide.

11. The apparatus of claim 8 with the wedge further having a first plurality of rollers mounted on a first side of the wedge and a second plurality of rollers mounted on a second side of the wedge, with the first

plurality of rollers contacting the actuator, and the second plurality of rollers contacting the adjustable guide.

12. The apparatus of claim 11 with the first plurality of rollers mounted on bearings on the wedge and having contact with the wedge engaging portion of the actuator, and with the second plurality of rollers mounted on bearings on the wedge and having contact with the adjustable guide.

13. The apparatus of claim 1 with the wedge engaging surface forming a wedge shaped slot in the actuator to provide mechanical advantage to the wedge when the wedge engages the actuator to move the friction creating portion.

14. The apparatus of claim 1 further comprising, in combination: a housing, with the friction creating portion comprising a first friction facing that is slideably received in the housing along the first axis, with the first friction facing being elongated along the first axis.

15. Apparatus comprising, in combination: a wedge moveable along a first axis, with the wedge having a wedge surface arranged nonparallel to the first axis; an actuator moveable along a second axis perpendicular to the first axis, with the actuator having a wedge engaging surface that engages with the wedge surface, with the actuator having a friction creating portion; an adjustable guide, with the adjustable guide disposed to adjust the wedge in the second axis, with movement of the actuator along the second axis being dependent on movement of the wedge along the first axis; and a wedge axial mover in contact with the wedge for moving the wedge along the first axis.

16. The apparatus of claim 15 with the wedge axial mover being in motion isolated contact with the wedge.

17. The apparatus of claim 15 further comprising in combination: a housing having a disk shaped opening, with the adjustable guide having a disk shape for receipt in the disk shaped opening, and with the wedge slideably mounted on the adjustable guide to adjust the position of the wedge in the second axis by slideable contact with the adjustable guide.

18. The apparatus of claim 17 with the disk shaped opening having a threaded guide aperture for receipt of the adjustable guide, with the adjustable guide further having threads for slideably mounting in the threaded guide aperture to adjust the position of the wedge in the second axis by slideable contact with the adjustable guide.

19. The apparatus of claim 15 with the wedge further having a first plurality of rollers mounted on a first side of the wedge and a second plurality of rollers mounted on a second side of the wedge, with the first plurality of rollers contacting the actuator, and the second plurality of rollers contacting the adjustable guide.

20. Apparatus comprising, in combination: a wedge moveable along a first axis, with the wedge having a wedge surface arranged nonparallel to the first axis; an actuator moveable along a second axis perpendicular to the first axis, with the actuator having a wedge engaging surface that engages with the wedge surface, with the actuator having a friction creating portion, with movement of the actuator along the second axis being dependent on movement of the wedge along the first axis; and means for moving the wedge along the first axis that does not move nonparallel to the first axis as a result of force on the wedge.

21. The apparatus of claim 20 with the means for moving the wedge comprising, in combination: a first chamber; and a first piston means, moveable in the first chamber along the first axis, for moving the

wedge along the first axis in response to introduction of fluid in the first chamber.